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A GENERAL VIEW OF THE PROPOSED  
PLAN FOR CO-OPERATION IN TECH-  
NICAL EDUCATION BETWEEN HARVARD  
UNIVERSITY AND THE MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY.

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*AN ADDRESS*

TO THE ALUMNI OF THE INSTITUTE

BY

HENRY S. PRITCHETT

*President, Massachusetts Institute of Technology.*

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A GENERAL VIEW OF THE PROPOSED PLAN FOR CO-OPERATION IN TECHNICAL EDUCATION BETWEEN HARVARD UNIVERSITY AND THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

BY HENRY S. PRITCHETT, PRESIDENT OF THE INSTITUTE OF TECHNOLOGY.

In the discussion of any public question it is well to remember two general facts. First, it seldom happens that all the truth and all the reason lie on one side of a question. Second, the differences between high-minded and honorable men in dealing with such questions generally come from differences in their points of view.

Both of these general facts have been illustrated in the discussion of a possible plan of alliance between Harvard University and the Institute of Technology for the promotion of technical education. It has been condemned unheard by some as destructive of the Institute's ideals and purposes. It has been praised by others as a solution of all its problems for the future. The thoughtful man who studies the plan as it is now laid before the Alumni will see in it great and splendid possibilities. He will see in it, also, serious difficulties and possible dangers. To such an one the question which presents itself is: Are the advantages to be gained sufficient to outweigh the difficulties and the possible risk?

To weigh this question fairly, it is necessary to have before one's mind, at least in outline, the past history of the Institute, the present status of technical education, and the probable developments for the future.

The Institute, as we know it to-day, is essentially a school of applied science for the training of the engineer, the chemist, and the architect. It is the survival of only a part of the general plan of education which President Rogers set in motion. This compre-

hensive plan, embracing the Society of Arts, the Industrial Museum, and the School of Applied Science, was intended to include the highest scientific research on the one side, and to extend to the training of artisans and mechanics on the other. That part of it which met an immediate demand was the school for the training of the engineer, the chemist, and the architect. This has grown and flourished, and it is this which we to-day call the Institute.

It has, however, kept steadily in mind President Rogers's ideal to combine with technical training the elements of a general education. This effort has meant development under a pressure which has grown greater year by year; that is, the pressure to retain the general studies, and still to do justice to the constantly differentiating lines of engineering and applied science. It has become more and more difficult to give in four years the fundamentals of a general education and the essentials of the engineer's training. The competition between technical schools is another factor to increase the tension. As a result the average engineering student must learn more things than he can learn well and more than he needs in his profession, while the exceptional man who could engage in engineering research finds in the technical school no opportunity for it.

The time, therefore, has evidently come when a new step in technical education will be taken. It is clear that within a few years the stronger technical schools are to take a forward step under which they will be free of much elementary work, and by which they may give to their professional students a wider freedom of study and a greater professional opportunity, and which will, above all, give to the professors of the technical school a larger share in the work of research. The Institute must also adapt its organization to its growing numbers in such way as to increase, not diminish, the efficiency of its education. The solution of any one or of all these problems means a very great increase in the support which the Institute must expect from the community and from the Commonwealth.

With this very brief survey of the educational situation let us turn to the proposition which we are to consider.

Reduced to its simplest terms, the plan proposes the following great advantages:—

(1) The effort to develop a great technical school to be worked out in this community in one great school, the Institute of Technology, instead of in two rival ones.

(2) The association and alliance with the oldest and greatest of American Universities.

(3) The undivided support of the community for technical education.

(4) The Institute's freedom in education unhampered.

On the other hand, the plan involves the following difficulties and possible disadvantages:—

(1) The possible effect upon the ideals and traditions of the Institute by transplanting to a new site.

(2) The danger of failure in an agreement revocable at the pleasure of either party thereto.

(3) The giving up of a site in the centre of the city which is convenient, accessible, and in many ways suited to the work of a technical school.

(4) The expense and effort necessary to secure a new site and new buildings.

As men study these advantages and disadvantages, they will be led to estimate the one as of greater weight than the other on general rather than on specific reasons,—reasons which lie at the basis of each man's philosophy of life and of action. My own belief is that the advantages and the possibilities of this plan outweigh the difficulties and the dangers which may be involved in it, and my reasons for thinking so are based on the fundamental considerations involved.

The great advantages which the plan suggests are those which have their basis in courage, not in fear, which turn toward the future rather than toward the past, which are founded in faith in the general common sense of men and not in distrust of them. It is, to my thinking, fundamentally right that we should have one great effort for technical education in this community, not two competing ones. Such a common effort is in the general direction of

the spirit and progress of the age. It is in accord with Emerson's conception: "Whatever tends toward unity is true: whatever tends toward diversity is false. Whatever tends toward harmony is right: whatever tends toward discord is wrong."

The intellectual and moral gain which would come from the allied effort of two groups of educated men in carrying out a common object would be of great value. No set of men have a monopoly of educational wisdom. The question set before us is,—and it is a question in which the whole country is interested,—Can two great educational institutions co-operate successfully for a great work? It is unthinkable that, once the plan were put into operation, the arrangement would ever be broken. For this much of common sense and fair-mindedness we may safely rely upon the men who are to control the University and the Institute. And there are few vistas of the future which appeal more to the imagination than that of these two great institutions, one on either side of the Charles, each beautiful, strong, and free, but joining in a common effort for the education and the upbuilding of the State and of the Nation. Neither Europe nor America could show so great an educational centre after twenty years.

One cannot reckon this matter, either, without taking into consideration the interests of the Commonwealth and of the community of Greater Boston; and each of these is vitally interested in preserving to this region the leadership in technical education. In the face of the growing facilities and advantages of other institutions this leadership would seem to be seriously endangered in the future by two parallel efforts in this community.

Much has been heard these last months concerning the duty of preserving to the Institute its "absolute independence." The arguments are precisely those which were used in the discussions preceding the adoption of the Federal Constitution by the separate States,—a discussion which in the case of Rhode Island lasted for two years. In our national experience we have come to see that what a State really needed was not a theoretical independence, but a practical freedom. I apprehend that what an institution of learning needs is freedom, and that no small part of that freedom, whether for a



State or an institution, is the freedom from local rivalry and competition. Such an alliance as is suggested would seem to mean a larger freedom, not a smaller one.

When the fathers discussed so hotly the question of independence for the States, their talk was of imposts and taxes and local interests. Back of those questions which formed the basis of dispute stood the larger question, which we of to-day realize was the real issue at stake,—the question of national unity and national greatness. On a smaller scale we deal in this matter in our discussions with the details which are local and of to-day; but the greater question which stands back of these details is that of a larger intellectual life and a higher educational leadership.

No one can have more at heart than I the preservation of that hearty spirit of work which is the pride of the Institute as it is of similar technical schools, nor of these more intangible influences which make up the general spirit of the school. In speaking of one of our older universities, Dr. Hamilton Mabie has very truly described this spirit in the following words:—

“Every great college has a background which must be taken into account in any endeavor to understand its history or to enter into its spirit. A college is a visible embodiment of certain invisible influences, which are as much a part of its educational equipment as its libraries, laboratories, teachers, and course of study. These constitute its larger and deeper, if less obvious life,—the life which searches, inspires, and often re-creates the spirit of the sensitive student.”

The question which lies nearest the heart of each Alumnus concerns itself with the preservation of this deeper invisible life. Will it bear transplanting? Will it be transmuted into something different in the new site and under the new associations? In answer we may safely say that some changes will come, but with equal truth it may be said some changes ought to come. Not all of our traditions should be preserved unchanged. We have traditions and influences that are narrowing as well as those which are uplifting. That which we value most highly, which we are proud to call the Technology spirit,—the spirit of earnest work, of devotion to truth,—

is not, to my thinking, a matter of geographic site or of student lodgings. It is not a thing to be preserved by certain limitations or to be destroyed by local surroundings. In this larger life which lies open to us it will grow with new vigor and send out new branches; but there will remain always the old-time spirit of earnestness, of sincerity, and of faith in the future, for these things are not matters of Boylston Street and Trinity Place, and human nature is fundamentally the same, whether we look on one side of the Charles River or the other.

The other difficulties seem to me also less formidable the closer one looks at them. Some of them we must meet in any case, and the others appeal rather to our fears than to our courage and our hope. I remember in one of the old-time readers, in the days when the school readers contained really good literature, a story of a boy travelling alone a country road at night. In the shadows of the forest he thought he could detect at every step lurking foes. Suddenly before him in the gloom he distinguished a gaunt spectre with outstretched arms waiting to seize him. With beating heart he ventured on, and the spectre proved a friendly guide-post to point him on his way. In the life of most men and of most institutions that which has seemed most to be feared in the future has proved a guide-post to show the way of progress. In the decision of this question let us take counsel of prudence by all means, but let us go forward without fear and without suspicion.

It is for these general and fundamental reasons—a belief in co-operation rather than in rivalry, confidence in the general honesty and ability of the men who control and are to control the University and the Institute, faith in a larger and wider work for the Institute—that I am willing to go forward with this plan, notwithstanding the difficulties which lie in the way of its execution.

The Corporation submits it to the Alumni for an expression of their opinion, with the conviction that it will receive at your hands the most careful consideration. In no other question likely to be submitted to you will there be a better opportunity to show that intellectual sincerity which our education in applied science is believed to give. Not in the tumult and the uproar of a great gathering

is this matter to be judged, but in the quiet chamber of each man's conscience and at the bar of each man's better judgment. Out of such consideration and such study we may well hope to reach a fair, a wise, and a satisfactory judgment.

Let me mention, in closing, two considerations of a general nature which seem to me important to bear in mind.

In the settlement of all such questions that which is present and tangible claims a much larger share of our attention, and seems relatively more important than that which is more distant. The thing of to-day assumes vastly wider perspective than the thing of ten years hence. Nevertheless, in dealing with this question, we have to do, not alone with the interests of the sixteen hundred students and the three thousand Alumni of to-day, but with the interests of the hundreds of thousands of students and of Alumni in the generations to come. So far, therefore, as a thoughtful man may do so, the settlement of this question demands a look into the future.

It is also well, in my judgment, to remind ourselves that the real greatness and the real usefulness of the Institute will not depend primarily upon the question whether its future course lies along one or the other of these paths. The real greatness of an institution of learning depends upon the scholarly spirit, the wisdom, and the devotion of its faculty and governing body, and upon the intellectual and moral life which they make possible to its students. The only serious crisis which an institution faces is that which it faces day by day and year by year in the problem of its development. Are the men in it wise and scholarly and able? Is the institution a centre of intellectual and spiritual influence? If these questions can be answered in the affirmative, the institution will be fulfilling its true end, whether its policy of administration carry it in one direction or another; and without these fundamental qualities it will not be strong, it will not be able to adapt itself to the times, it will not be a centre of inspiration, no matter what path may be marked out for it.

And, finally, whether we enter into some such plan as this, or whether we remain where we are, or whether we remove the Institute to some other location, whatever the solution we adopt at this

time, it will be necessary for the friends of the Institute to meet at once the questions of furnishing larger facilities, better equipment, more teachers, and more adequate pay for those teachers; and this problem is nothing more nor less than the problem which the rapid development of America is pressing upon all our sister institutions. Whatever may be our honest differences of judgment as to the wisdom of this or that policy, I trust that there can be no difference of opinion or of loyalty in the service of the Institute. I count that we shall in the end stand, whatever the decision in this matter, on one platform and for one cause; that is, the upbuilding of the Institute of Technology as an intellectual and spiritual power in the Commonwealth and in the Nation. In this cause I am glad to labor just as heartily, whether our future development lies along one of these paths or another.

NOTE.—For the better understanding of the proposed plan the following information concerning certain sections is added by the President:—

SECTION VI. The term Industrial Science is used to conform with the original publications of the Institute, and not to indicate a separation of instruction as between pure and applied science.

In the present Faculty of the Institute are 65 members. The maximum number which could be added from the Lawrence Scientific School under this section is 16.

SECT. XII. Under this section a graduate would receive the Institute degree and diploma exactly as at present. In addition he might receive the same degree, on the same Faculty recommendation, from Harvard University.

SECT. XIII. This section does not provide for instruction in Harvard of students of the Institute in general studies, nor for instruction of Harvard students in the Institute in chemistry and physics. Each institution will give its own instruction in all subjects, and no limit is placed on instruction, the limit being only as regards the giving of degrees. Technology can, under this agreement, add Latin and Greek to its curriculum, if it desires, but it could not give degrees in these subjects.

The interchange of students here provided for is an interchange of a limited number of advanced students and research students.

SECT. XV. The Department of Architecture has been omitted from this tentative plan for the simple reason that Harvard has buildings which can be used only for instruction in architecture. If agreement in all other points can be reached, it was thought that some satisfactory solution of the architectural problem could be found later.

SECT. XVII. It is assumed that all buildings upon the new site shall be paid for by Technology, and belong to it.

AGREEMENT BETWEEN HARVARD UNIVERSITY AND THE MASSACHU-  
SETTS INSTITUTE OF TECHNOLOGY FOR CO-OPERATION AND  
ALLIANCE IN THE CONDUCT AND PROMOTION OF  
EDUCATION IN INDUSTRIAL SCIENCE

Harvard University and the Massachusetts Institute of Technology, being convinced, after a careful consideration of the conditions which affect the work of education in industrial science, that such work can be greatly advanced and enlarged by a co-operation of the two institutions, in order to secure mutual assistance, render possible a larger enterprise, promote economy, avoid duplication and competition, and give to the purpose of donors who have bestowed money in trust for that object a fuller accomplishment, do make this agreement, which shall endure so long as it shall be found to serve, to the satisfaction of both institutions, the objects above declared. But, whereas the carrying out of such agreement will require the employment of the income of the funds which the University holds, or will hereafter hold in trust, and the University feels that faithfulness in the performance of these trusts which it has accepted is its first duty, to which all other considerations must yield, this agreement shall not go into effect until and unless the University shall have applied to the Supreme Judicial Court for instructions and the court shall have made a decree that this agreement may be carried out without violation of its duties as a trustee and in accordance with law and equity.

## I.

The organization of the University, the organization of the Institute, and the title of each to its property and funds shall remain unaffected by this agreement, as shall also the rights and duties of each in investing and managing its funds.

## II.

The institution for the combined work of promoting and furnishing education in industrial science, which it is the object of this agreement to establish, shall retain the name of the Massachusetts Institute of Technology; it shall be under the direction of an Executive Committee, and the instruction therein shall be given by a Faculty, which two bodies shall be constituted as herein below provided.

## III.

The said Executive Committee shall consist of nine persons, to be designated by the Massachusetts Institute of Technology, of whom two shall be the President of the Corporation of the Institute and the Treasurer of the Institute, and three shall be members of the Corporation of the University.

Subject to the restrictions herein below expressed, the said Executive Committee shall have the general administration and superintendence of all matters concerning said combined work, including the appointment of officers of instruction and government, and of servants, the power to remove any of them, the fixing of their salaries and the prescribing of their duties, the care of buildings, property, and equipment, the appropriation of money put at its disposal under this agreement, the fixing, collecting, and expending of students' fees, and the supervision and direction of the work of the Faculty, these being substantially the powers now conferred on the Executive Committee of the Institute by its by-laws; it being, however, expressly provided that all appropriations from money furnished either by the University or by the Institute, and all proposed appoint-

ments or removals of officers whose salaries are to be paid therefrom, shall be submitted to the Corporation concerned and approved by it before being finally adopted, it being understood that students' fees shall be deemed to be furnished by the Institute, and that no change shall be made in those fees without its approval.

The said Executive Committee shall keep records of its proceedings, and shall make reports to the Corporation of the University and the Corporation of the Institute annually, and at such other times as either Corporation may request.

#### IV.

The President of the Institute for the time being shall be the President of the said Executive Committee, and shall preside at its meetings, when present. His salary, as fixed by the Corporation of the Institute, shall be paid from the funds furnished by the Institute. He shall be the Chairman of the Faculty, shall have the superintendence of the several departments, and shall act as general executive and administrative officer, subject to the direction and control of said Executive Committee. He shall annually make a report to the Corporation of the University and to the Corporation of the Institute. Whenever a person shall vacate the office of President of the Institute, he shall thereupon cease to be a member of the said Executive Committee.

#### V.

The Treasurer of the Massachusetts Institute of Technology shall be *ex officio* the Treasurer of the said Executive Committee. He shall, as Treasurer of the said Executive Committee, have charge of the funds put at the disposal of said committee, shall make such payments as the committee may authorize, shall keep accurate accounts of all money received and expended, and shall make report of his doings annually, or oftener if required, to the said committee, and to the Corporation of the University and to the Corporation of the Institute.

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## VI.

The Faculty shall consist of all the present professors, associate professors, and assistant professors of the Institute, and all professors, associate professors, and assistant professors of the University who now give courses of instruction leading to degrees in industrial science, and such officers hereafter appointed as said Executive Committee may designate. The present professors, associate professors, and assistant professors of the University as aforesaid shall not be removed nor have their present salaries reduced without the consent of the Corporation of the University.

Subject to the supervision and direction of the said Executive Committee, the Faculty shall have charge of instruction and discipline.

## VII.

Subject to the reservations hereinafter set forth, the University shall place at the disposal of said Executive Committee, as above provided, the net income of all funds which are now credited on its books to the credit of the Lawrence Scientific School, also the use of all machinery, instruments, and equipment which the University holds, and the income of all property which it may hereafter acquire for the promotion of instruction in industrial science, and also three-fifths, but no more, of the net income which may accrue from the bequest and devise of the late Gordon McKay.

## VIII.

Subject to the reservations herein set forth, the Institute shall place at the disposal of the said Executive Committee the net income of all funds and the use of all property and equipment which the Institute may hold for the promotion of instruction in industrial science, reserving only such amounts and property as it may require to maintain its organization and to carry on such functions as may remain to it independently of the promotion of industrial science.



## IX.

In so far as money contributed by either Corporation under this agreement may be used by the said Executive Committee for the purchase of equipment or supplies, the title thereto shall be in the Corporation whose money is appropriated therefor.

## X.

The site of the institution shall be in Boston on the right bank of the Charles River, as nearly as practicable opposite to Harvard Square, and the Massachusetts Institute of Technology shall there erect, furnish, and equip buildings having the capacity of at least its present buildings. But the Institute shall not be required to proceed with such purchase and construction until it shall have sold a sufficient part of the land which it now owns. Provided, however, that this agreement shall be avoided if at the end of four years from the time when this agreement goes into effect the Institute shall not have purchased said land and proceeded to a substantial extent with such construction.

## XI.

Within three years after the Massachusetts Institute of Technology begins the construction of such new buildings, if the Institute is then prepared to give in its new location to the students of the Lawrence Scientific School all needed instruction in industrial science, the Lawrence Scientific School shall be discontinued as a separate school of industrial science so long as this agreement remains in force.

## XII.

The degrees of Bachelor, Master and Doctor in Science, so far as given in industrial science, and all degrees in engineering, together with the requirements of courses of study leading to these degrees, shall be within the province of the Faculty; and these degrees shall

be conferred by the Corporations of the University and the Institute, acting separately.

### XIII.

Male students in the Institute shall have the same privileges as students in Harvard University in the use of the playgrounds, museums, and libraries of the University.

Under regulations to be made by the two Corporations, and on payment of proper fees, students of the Institute shall be admitted to courses of instruction and the use of laboratories of the University, outside of those pertaining to industrial science, and students of the University to the courses and use of laboratories of the Institute.

### XIV.

The Corporation and Overseers of the University and the Corporation of the Massachusetts Institute of Technology shall each have full right at all times to inspect the institution, and suggest to the said Executive Committee changes in the methods of management.

### XV.

The Department of Architecture in the University and in the Institute respectively are not included in this agreement, but remain unaffected hereby.

### XVI.

It is expressly provided that, as regards the funds and property of the University and of the Institute respectively, this agreement shall be subject to any special terms and requirements upon which such funds and property may be held; and any property or funds which may be held at any time by either Corporation under such terms and restrictions as would prevent the use of them in the precise manner contemplated by this agreement shall, nevertheless, be used

by the two Corporations respectively for the support, benefit, or encouragement of the scheme agreed upon, in such manner as may be permissible and in accordance with the trusts upon which they may be held.

#### XVII.

The arrangements established by this agreement may be terminated at any time either by the President and Fellows of Harvard University or by the Corporation of the Massachusetts Institute of Technology, upon reasonable notice to the other Corporation.

In the event of the termination of this agreement, the Massachusetts Institute of Technology must pay, at such prices and upon such terms as the parties may agree upon, and, if they cannot agree thereon, as may be fixed by arbitration (usual arbitration clause), for any buildings or fixtures upon said site, paid for with funds furnished by the University.

#### XVIII.

This agreement shall take effect when finally adopted and approved by the Corporation and the Overseers of the University and the Corporation of the Institute, and when and if a decree of the Supreme Judicial Court, as provided for in the preamble hereof, shall have been obtained.







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